ABSTRACT OF THE DISCLOSURE

Systems and techniques to write servo patterns on machine-readable media. In general, in one implementation, the technique includes: obtaining timing information from a spiral servo reference track on a machine-readable medium to determine head position, and generating a servo track with servo information based on the determined head position. Obtaining the timing information can involve determining a peak position of a diamond-shaped waveform and identifying occurrences of a timing-reference symbol in the spiral servo reference track. Moreover, identifying occurrences of the timing-reference symbol can involve decoding an encoded repeating pattern using multiple framings, correlating signal samples that indicate pattern transitions with valid pattern transitions as defined by the encoding, accumulating the transition pattern correlations for the multiple framings, selecting one of the multiple framings as a correct framing, and determining a waveform polarity for the signal.

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